

Docket No.: 066662-0112

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Schilling, Christophe H., et al.	Customer No.:	41552
Appl. No.	: 09/928,191	Confirmation No.:	6758
Filed	: August 11, 2001		
Title	: IDENTIFICATION OF ANTIBIOTIC TARGETS AND CRITICAL POINTS IN METABOLIC NETWORKS BASED ON PATHWAY ANALYSIS		

Grp./A.U. : 1631
Examiner: : Clow, Lori A.

DECLARATION PURSUANT TO 37 C.F.R. § 1.132

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

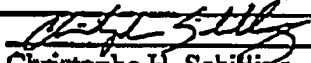
Sir:

We, Christophe H. Schilling and David Letscher, hereby declare as follows:

1. We are the Christophe H. Schilling and David Letscher who are named as the co-inventors on the above-identified patent application.
2. We are the Christophe H. Schilling and David Letscher who are named as co-authors with Drs. Bernhard Ø. Palsson and Jeremy S. Edwards, on the publication entitled "Combining Pathway Analysis with Flux Balance Analysis for the Comprehensive Study of Metabolic Systems," published as Schilling et al., *Biotechnol. Bioeng.* 71:286-306 (2001).
3. The invention claimed in the subject application was conceived and reduced to practice by us jointly while I, Christophe H. Schilling was working in Dr. Palsson's laboratory. I, David Letscher, was working in the Department of Mathematics at University of California, San Diego, as an assistant professor during the conception and reduction to practice of the claimed invention.

4. The impetus for solving the problem of modeling metabolic systems, which is the general subject matter of the Schilling et al., *supra*, publication, was supplied by Dr. Palsson. Laboratory support and professional encouragement also was supplied by Dr. Palsson. Dr. Edwards was involved in the scientific project because of his skill and knowledge with flux balance analysis. However, the claimed invention is directed to the identification of targets in metabolic networks using pathway analysis whereas the Schilling et al., *supra*, publication discusses the combination of pathway analysis with flux balance analysis for the study of metabolic systems. Conception of pathway analysis using maximum flux constraints, or extreme pathways, to allow predictive modeling of metabolic systems and reduction to practice occurred in Dr. Palsson's laboratory by us jointly. Therefore, while recognized as co-authors of the Schilling et al. publication, Drs. Palsson and Edwards did not contribute to aspects of the subject matter claimed in the above-identified application. Therefore, Drs. Palsson and Edwards were not named as co-inventors of the claimed invention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date:	<u>Feb 10, 2006</u>	By:	<u></u> Christophe H. Schilling
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Date:	<u> </u>	By:	<u> </u> David Letscher
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09/928,191

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Date:	_____	By:	_____
			Christophe H. Schilling
Date:	2-13-2006	By:	_____
			David Letscher